

1- **Tissue of origin:-** Squamous epithelium

**Lesion:** Squamous cell papilloma

**Macro:** Papilloma appears as wart like, or horn like or cauliflower in shape.



② **Tissue of origin:-** Squamous epithelium

**Stain:** H&E

**Lesion:** Squamous cell papilloma

**Micro:** The benign tumor represented by hyperkeratosis and acanthosis besides intact basal cell layer.



**3- Tissue of origin:-** Squamous epithelium

**Lesion:** Squamous cell carcinoma

**Macro:** The surface of carcinoma is usually inflamed, crusty and ulcerative with raised edges and necrotic floor. It has offensive odor. The cut surface is grayish-white in color with distinct stroma. The regional lymph nodes are swollen.

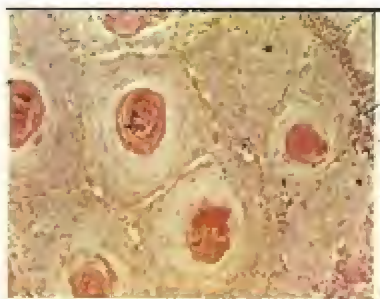


**(4) Tissue of origin:-** Squamous epithelium

**Stain:** H&E

**Lesion:** Squamous cell carcinoma

**Micro:** The dermis showed extended cords of malignant cells from epidermis to form cell nest in cross section. The cell nest represented by polyhedral cell in the peripheral of lesion, followed by flattened cells toward the keratinized center. The nucleus showed characters of malignancy.



5- **Tissue of origin:-** Squamous epithelium

**Stain:** H&E

**Lesion:** Keratoacanthoma

**Macro:** gross picture shows an ulcerated dermal mass.

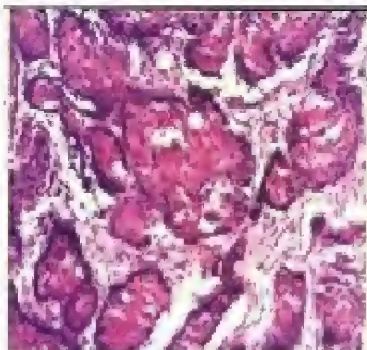


6- **Tissue of origin:-** Squamous epithelium

**Stain:** H&E

**Lesion:** keratoacanthoma

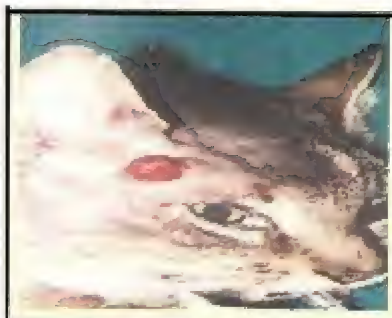
**Micro:** The lesion is a multiloculated keratin cyst filled with concentrically laminated keratin surrounded by hyperplastic epithelium.



7- **Tissue of origin:-** Squamous epithelium

**Lesion:** Basal cell carcinoma

**Macro:** The tumor appears firm, red and ulcerated. The ulcer has raised inverted edge and crusted floor

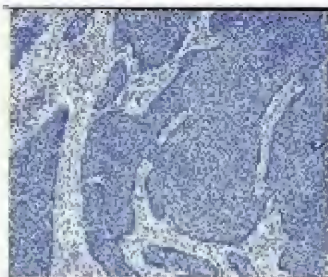


8- **Tissue of origin:-** Squamous epithelium

**Stain:** H&E

**Lesion:** Basal cell carcinoma

**Micro:** The malignant cells are small and oval in shape with dark hyperchromatic nuclei arranged in nodules separated by fibrous tissue stroma. The cells in nodules arranged in rows where the longitudinal axis of cells is perpendicular on the axis of row.

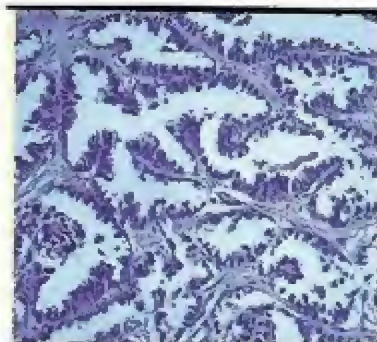


(9) **Tissue of origin:-** Glandular epithelium

**Stain:** H&E

**Lesion:** Adenoma

**Micro:** The glandular tissue is similar to normal structure but with hypercellularity.

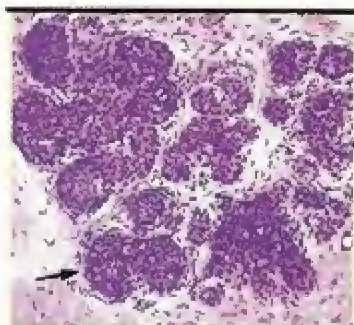


(10) **Tissue of origin:-** Glandular epithelium

**Stain:** H&E

**Lesion:** Adenocarcinoma

**Micro:** The tumor consists of malignant cells with destructed basement membrane. The acini are lined by more than one layer of the cells aggregated in the form of solid nodules.



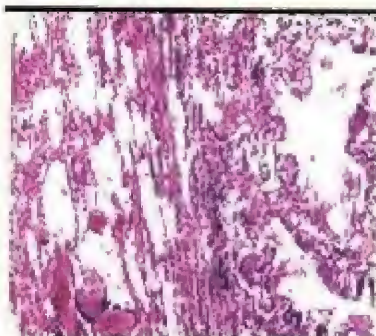


**(11) Tissue of origin:-** Glandular epithelium

**Stain:** H&E

**Lesion:** Metastatic adenocarcinoma

**Micro:** Cuboidal or low columnar epithelium (1) is arranged in the form of rows or tends to form acini, which partially replaced the affected pulmonary tissue. The nuclei are hyperchromatic and the stroma is distinct. The air vesicles, around the lesion, are collapsed.

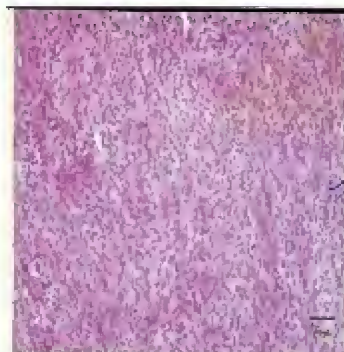


**(12) Tissue of origin:** fibroblasts.

**Stain:** H&E.

**Lesion:** fibroma

**Micro:** well circumscribed mass consisting of spindle shaped fibroblasts; their nuclei take the shape of the cells with tapered ends running in various directions and tend to form whorls around blood vessels. No atypical mitotic figures are seen.

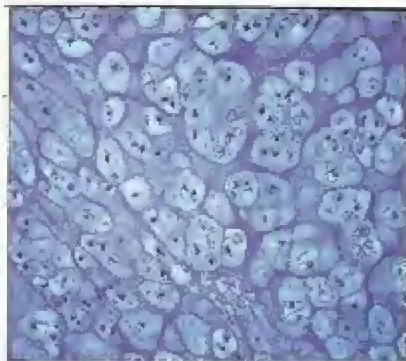


**13- Tissue of origin:** chondroblasts.

**Stain:** H&E.

**Lesion:** chondroma

**Micro:** well circumscribed mass consisting of chondroblasts in lacunae similar to normal hyaline cartilage except of different shapes and sizes that tend to be smaller towards the periphery of the tumor mass and the cells are arranged in single lacuna.



**14- Tissue of origin:** epiphyseal bone

**Lesion:** Chondrosarcoma

**Macro:** Presence of soft mass projecting from cartilage in epiphyseal bone.

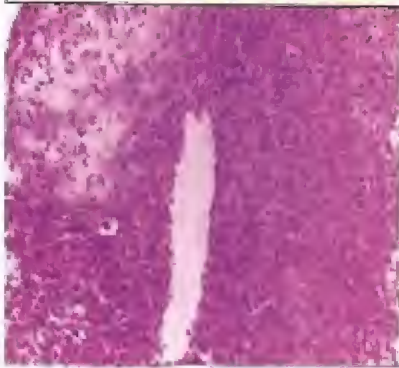


**15- Tissue of origin:** chondroblasts.

**Stain:** H&E.

**Lesion:** chondrosarcoma

**Micro:** unencircled mass consisting of spindle or fusiform neoplastic chondroblasts like fibrosarcoma, their nuclei take the shape of the cells running in various directions. Typical and atypical mitotic figures are seen. Remnant of hyaline cartilage is seen at the periphery.

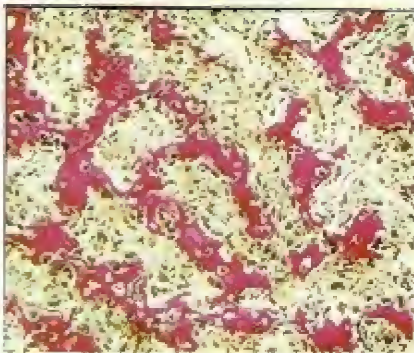


**16- Tissue of origin:** osteoblasts.

**Stain:** H&E.

**Lesion:** osteosarcoma.

**Micro:** fusiform, spindle neoplastic cells running in various directions tend to form whorls like fibrosarcoma except for the presence of remnant of bone spicules.



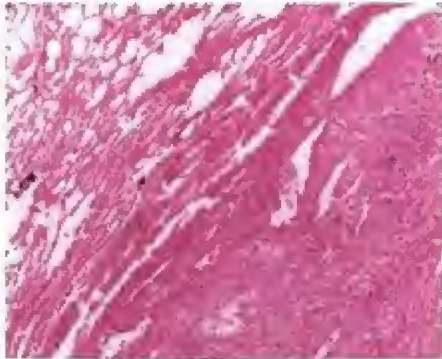


**17- Tissue of origin:** Periosteum (osteoblasts)

**Stain:** H&E.

**Lesion:** Metastatic osteosarcoma

**Micro:** well-circumscribed neoplastic mass focally replacing the pulmonary tissue. It is similar to osteosarcoma spindle shaped neoplastic cells. The surrounding air vesicles are collapsed due to pressure atrophy of the neoplasm.

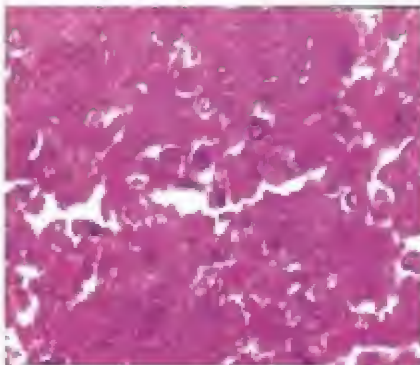


**18- Tissue of origin:** Osteoclasts

**Stain:** H&E.

**Lesion:** Osteoclastoma

**Micro:** The neoplasm is represented by numerous multinucleated osteoclasts, mixed with neoplastic spindle cells.



**19- Tissue of origin:** smooth muscle of rectum (buffalo).

**Lesion:** rectal leiomyoma

**Macro:** well circumscribed un-encapsulated fleshy soft mass protruding from the rectum.



**20- Tissue of origin:** smooth muscle.

**Stain:** H&E

**Lesion:** rectal leiomyoma

**Micro:** well circumscribed un-encapsulated mass consisting of spindle shaped smooth muscle, their nuclei take the shape of the cells with rounded ends (cigar shaped) running in various directions and tend to form whorls around blood vessels. No atypical mitotic figures are seen.

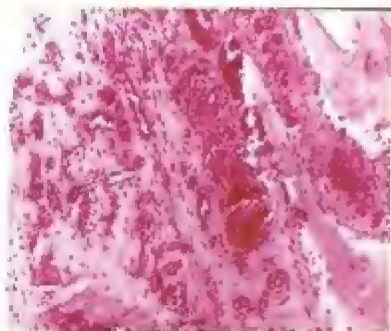


**21- Tissue of origin:** Endothelial lining of blood-vessels.

**Stain:** H&E.

**Lesion:** Capillary or plexiform hemangioma

**Micro:** The neoplastic endothelium formed differentiated capillaries.

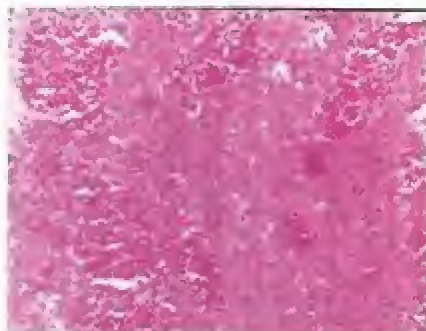


**22- Tissue of origin:** Endothelial lining of hepatic sinusoids.

**Stain:** H&E.

**Lesion:** Cavernous hemangioma

**Micro:** The neoplastic endothelial lining of the hepatic sinusoids formed cavities of irregular sizes and shapes lined with endothelium and filled with blood which replaced the hepatic cells in the affected area.

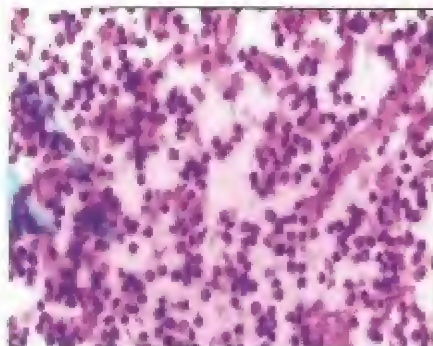


**23- Tissue of origin:** Lymphoid tissue.

**Stain:** H&E.

**Lesion:** Lymphosarcoma (small-cell type).

**Micro:** All the structures of the lymphoid tissue are replaced by small rounded lymphocytes (10 microns diameter). Their large nuclei occupied all the cytoplasm with peripherally condensed chromatin and surrounded by a thin layer of cytoplasm.

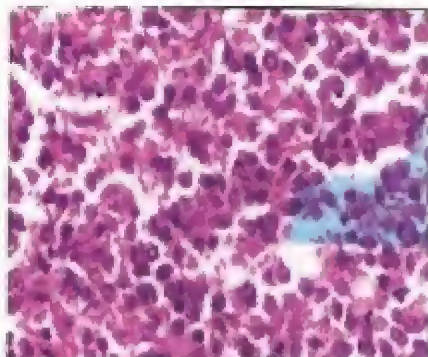


**24- Tissue of origin:** Lymphoid tissue

**Stain:** H&E.

**Lesion:** Malignant lymphoma (stem-cell type).

**Micro:** The structure of the affected tissue is replaced by large lymphocytes with large irregular nuclei and scanty cytoplasm.



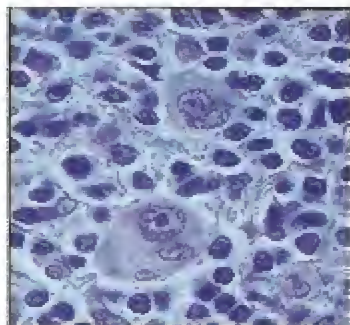


**25- Tissue of origin:** Lymphoid tissue

**Stain:** H&E.

**Lesion:** Malignant lymphoma (Hodjkin type).

**Micro:** the tumor is distinguishable from malignant lymphoma by presence of diagnostic Reed-Sternberg cells. The cell is large and containing two nuclei with prominent nucleoli resample inclusion body (Owl eyed).

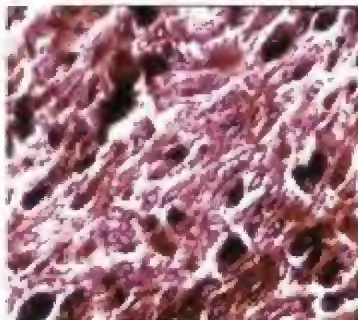


**26- Tissue of origin:** Melanoblasts.

**Stain:** H&E.

**Lesion:** Malignant melanoma

**Micro:** The tumor consists of spindle, oval or irregularly rounded melanoblasts with numerous brownish pigments inside the cytoplasm. The pigments may overshadow the structure of the cell.



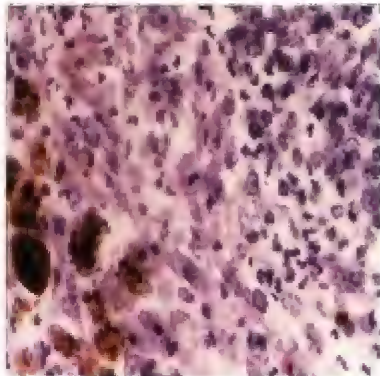


**27- Tissue of origin:** Melanoblasts

**Stain:** H&E.

**Lesion:** Amelanotic melanoma

**Micro:** The tumor is highly cellular and consists of irregularly rounded large cells with enlarged vesicular nucleus which is hyperchromatic and shows mitotic activity. Almost no melanin is seen in the cytoplasm of the neoplastic melanoblasts.



**28- Tissue of origin:** peripheral nerve

**Lesion:** neurofibroma

**Macro:** un-capsulated yellowish mass arises in the sheath of peripheral nerve with irregular surface and soft texture

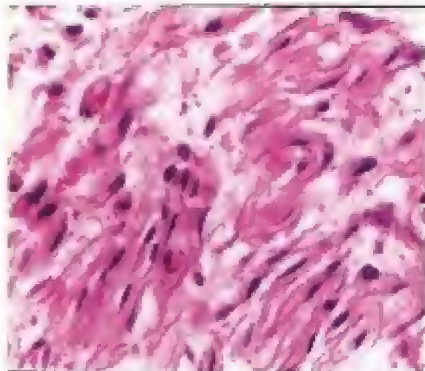


**29- Tissue of origin:** peripheral nerve

**Stain:** H&E.

**Lesion:** neurofibroma

**Micro:** spindle elongated neurofibroblasts which arranged parallel to each other in palisad manner or form whorls embedded in a fibrous stroma

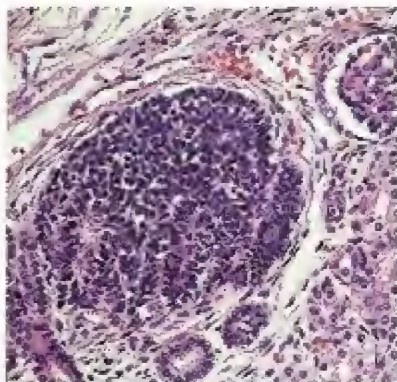


**30- Tissue of origin:** kidney (nephron)

**Stain:** H&E.

**Lesion:** nephroblastoma

**Micro:** tumor arise from renal blastema (embryonic cells from which the kidneys develop. Aggregations of epithelial cells which tend to form glomerular like structures (1) (without capillaries), solid masses of epithelium or tubular like structures are scattered in a connective tissue stroma (2).



**31- Organ:** Hard palate

**Lesion:** Palatoschisis

**Macro:** the lateral palatine process has failed to fuse. Also upper the lip is also cleft.



**32- Organ:** Hard palate

**Lesion:** ulcerative stomatitis

**Macro:** loss of lining epithelium of hard palate and appears as red area.



**33- Organ:** Reticulum

**Lesion:** Traumatic reticulitis

**Macro:** Several ingested wires are lodged in tunica muscularis. Each wire surrounded by sinus tract draining pus into surface of reticulum.

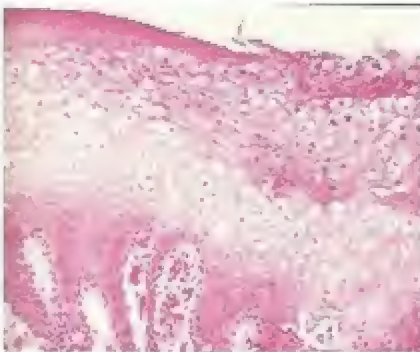


**34- Organ:** Hard palate

**Lesion:** vesicular stomatitis

**Stain:** H&E

**Micro:** presence of hydropic degeneration and ballooning degeneration in stratum spinosum. The lamina propria is showing vasculitis.



**35- Organ:** esophagus

**Lesion:** Ulcerative esophagitis

**Macro:** presence of red streaks indicating loss of esophageal mucosa. Meanwhile, the white streaks which indicating hyperplasia esophageal epithelium.

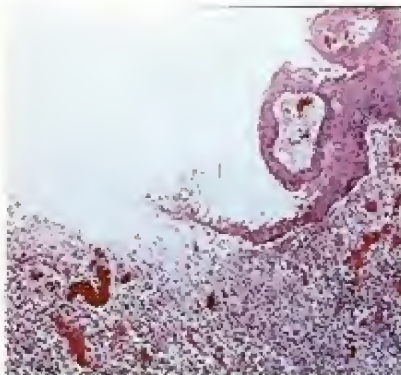


**36- Organ:** esophagus

**Lesion:** Ulcerative esophagitis

**Stain:** H&E

**Micro:** loss of epithelium lining esophagus leading to exposure of underlying lamina propria. Neutrophilic and round cell infiltration beside severe congestion in lamina propria are seen.



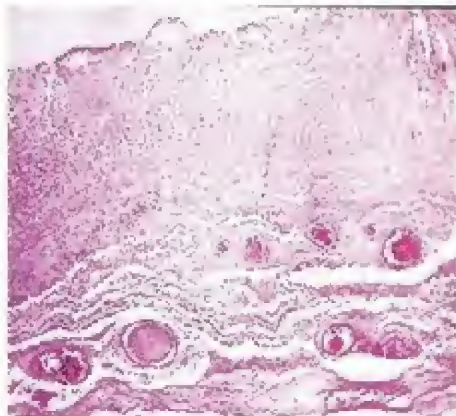


**37- Organ:** Abomasum

**Lesion:** necrotic abomasitis

**Stain:** H&E

**Micro:** necrosis and desquamation of abomasal epithelium. Congestion and edema are present in lamina propria beside dilation of abomasal glands.

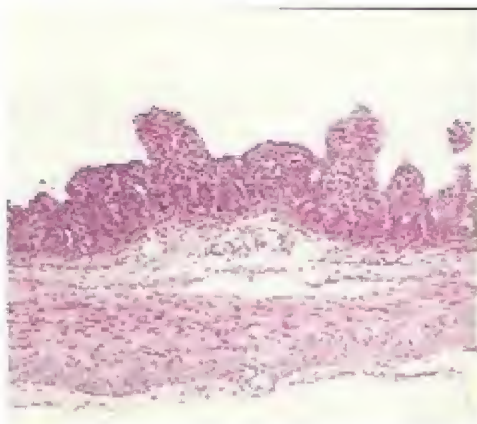


**38- Organ:** Jejunum

**Lesion:** stunted atrophied villi

**Stain:** H&E

**Micro:** blunting and fusion of intestinal villi are seen due to *Rota virus*.



**39- Organ:** intestine

**Lesion:** parasitic enteritis

**Stain:** H&E

**Micro:** parasite (*Parascaris equorum*) is present in wall of intestine surrounded by fibrous tissue that infiltrated by eosinophils, macrophages and lymphocytes.



**40- Organ:** intestine

**Lesion:** Necro-hemorrhagic enteritis.

**Macro:** swollen darkly red coloration of intestinal mucosa.

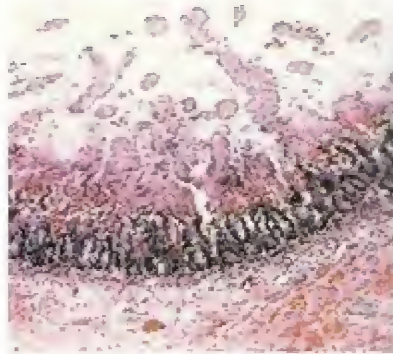


**41- Organ:** intestine

**Lesion:** Necrohemorrhagic enteritis.

**Stain:** H&E

**Micro:** severe necrosis and desquamation of superficial mucosa with the presence of severe hemorrhage which indicated by escape of RBCS in mucosa and submucosa with congestion and leukocytic infiltration.

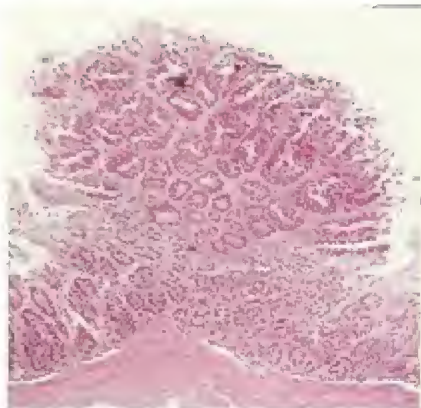


**42- Organ:** intestine

**Lesion:** Proliferative enteritis.

**Stain:** H&E

**Micro:** hyperplasia of enterocytes lining crypts and leukocytic infiltration due to repeated injury as result of coccidial infection.



**43- Organ:** nasal cavity

**Lesion:** suppurative rhinitis.

**Macro:** presence of purulent material in nasal cavity.



**44- Organ:** nasal cavity

**Lesion:** fibrinous rhinitis.

**Macro:** presence of grayish yellow fibrinous material in nasal cavity.

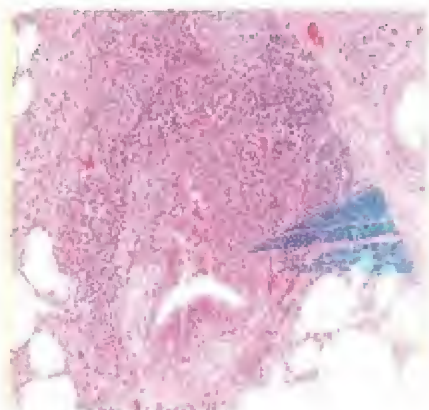


**45- Organ: lung**

**Lesion: bronchiolitis obliterans**

**Stain: H&E**

**Micro: peri-bronchiolar lymphoid cuffing with marked peribronchia lymphoid aggregation.**

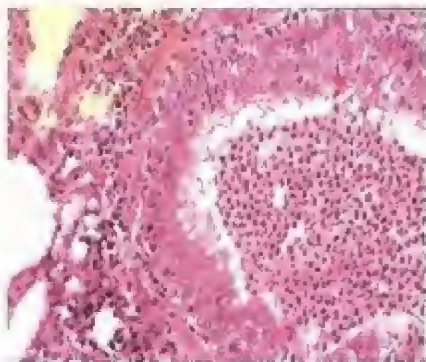


**46- Organ: lung**

**Lesion: Chronic bronchiolitis.**

**Stain: H&E**

**Micro: Peribronchiolar mononuclear infiltrate, hyperplasia and goblet cell metaplasia of the bronchiolar epithelium, macrophages, lymphocytes and neutrophils in the lumen and the epithelium.**





**47- Organ:** lung

**Lesion:** multiple abscesses

**Macro:** cut section of the lung shows whitish abscesses are focally replacing pulmonary tissue consisted of caseated material.

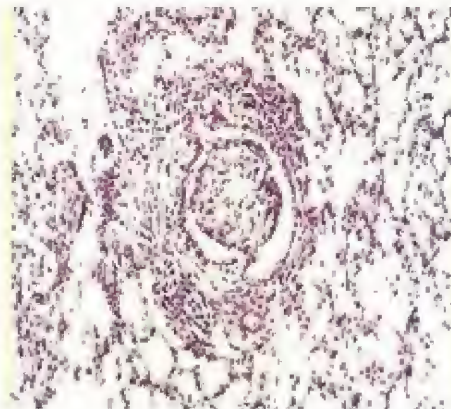


**48- Organ:** lung

**Lesion:** chronic bronchiolitis.

**Stain:** H&E

**Micro:** fibrous polyp from bronchiolar lamina propria is invading the lumen of bronchiole.



**49- Organ:** lung

**Lesion:** Blood aspiration

**Macro:** lung, cut surface. The branches of the bronchial tree are made clearly visible by the aspiration of blood; the large bronchi contain bloody froth.

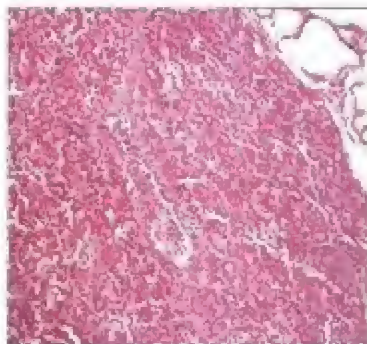


**50- Organ:** lung

**Lesion:** focal acquired atelectasis (collapse)

**Stain:** H&E

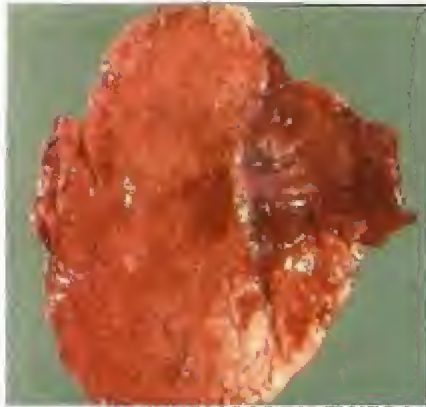
**Micro:** lung, cut surface. Focal area of pulmonary alveoli appears slit-like (without lumina) adjacent to a functional area and lined by cuboidal fetal epithelium (fetalization).



**51- Organ:** lung

**Lesion:** focal acquired atelectasis (collapse)

**Macro:** surface of lung showed focally dark red firm and depressed area.



**52- Organ:** lung

**Lesion:** diffuse emphysema

**Macro:** enlarged spongy lungs with pallor color (in situ; in thoracic cavity).

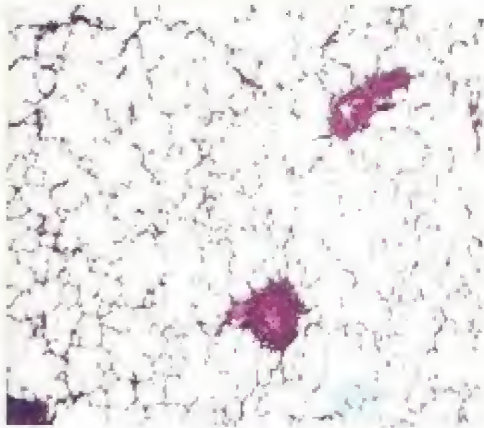


**53- Organ:** lung

**Lesion:** alveolar emphysema

**Stain:** H&E

**Micro:** Alveolar emphysema characterized by diffuse distention of the alveoli may be caused by partial obstruction of the bronchioles.

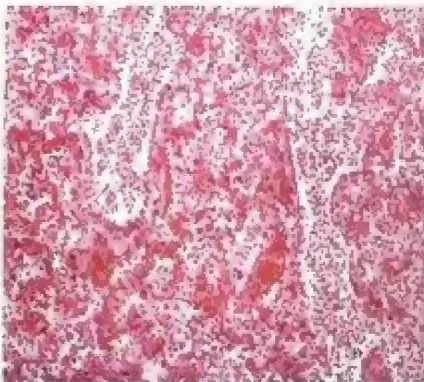


**54- Organ:** lung

**Lesion:** catarrhal bronchopneumonia

**Stain:** H&E

**Micro:** congestion of the interstitial alveolar blood vessels. Eosinophilic exudate containing leukocytes (mainly neutrophils and macrophages) infiltrates the pulmonary alveoli and bronchioles.



**55- Organ:** lung

**Lesion:** acute catarrhal pneumonia

**Macro:** Focal consolidated pneumonic areas appears soft grayish



**56- Organ:** lung

**Lesion:** Severe fibrinous pleuropneumonia

**Macro:** Focal consolidated pneumonic areas appears dark red and surface of the lungs is covered by grayish yellowish fibrinous membrane



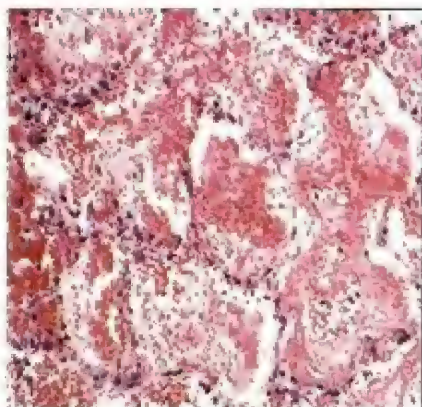


**57- Organ:** lung

**Lesion:** Fibrinous pneumonia

**Stain:** H&E

**Micro:** dirty pink fibrinous exudate is filling and damaging architecture of the pulmonary alveoli infiltrated with leukocytes (mainly neutrophils and macrophages) and RBCs.



**58- Organ:** lung

**Lesion:** congestion and edema

**Macro:** dark red enlarged edematous lungs (pits under press) with pale edematous interstitial pulmonary septae.

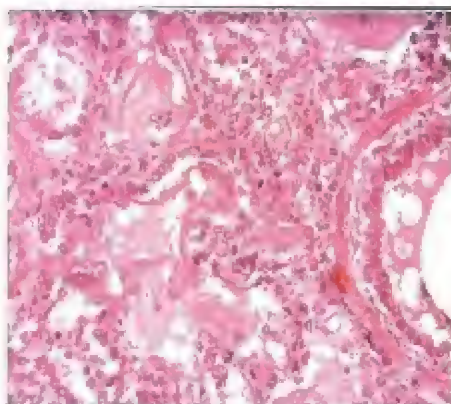


**59- Organ:** lung

**Lesion:** interstitial pneumonia

**Stain:** H&E

**Micro:** eosinophilic hyaline membrane is covering alveolar epithelium highly characteristic for interstitial pneumonia. The interstitial pulmonary septae are dilated with infiltrated leukocytes (mainly lymphocytes and macrophages)



**60- Organ:** lung

**Lesion:** interstitial pneumonia

**Macro:** Pale-gray enlarged voluminous lungs having a meaty consistency.

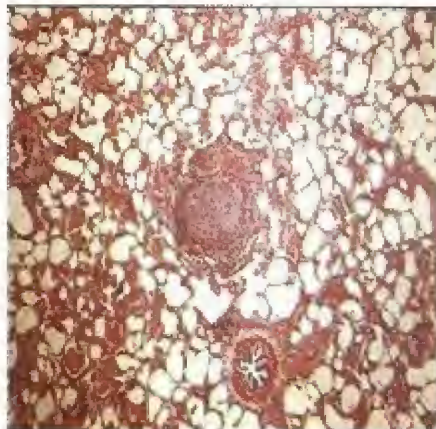


**61- Organ:** lungs

**Lesion:** bronchiolitis obliterans fibrosa

**Stain:** H&E

**Micro:** bronchiolar lumen is completely obliterated by fibrous tissue and inflammatory cells



**62- Organ:** kidney

**Lesion:** Cortical cysts

**Macro:** Renal surface. Multiple small prominent cysts in the cortex, due to dilation of parts of the nephrons (Bowman's capsules and/or tubules) associated with accumulation of glomerular filtrate.



**63- Organ:** kidney

**Lesion:** Medullary cyst

**Macro:** renal cut surface. A single large cyst is seen in the medulla. The cysts may be multiple and smaller. They are usually the result of dilated collecting tubules and represent incidentally found congenital lesions. The fibrosis in the overlying cortex of the present case may be secondary to the expansion of the cyst.



**64- Organ:** kidney

**Lesion:** Infarct

**Macro:** Renal surface. Large red-colored hemorrhagic infarct due to subtotal thrombotic occlusion of renal artery branch is seen. The necrotic area is slightly raised and sharply defined from surrounding tissue. On cut surface wedge-shaped lesions involving cortex and medulla are found.



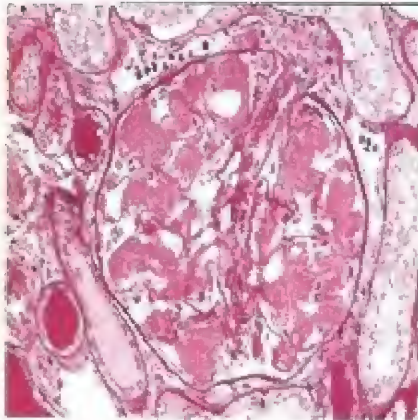


**65-Organ:** kidney

**Lesion:** Glomerular amyloidosis

**Stain:** PAS-stain

**Micro:** Deposition of amyloid on the inner aspect of the violet stained glomerular basement membrane. In some places penetration of the basement membrane by small spicular projections of amyloid at its outer aspect has occurred. Neighboring tubules contain pink proteinaceous material and violet casts.

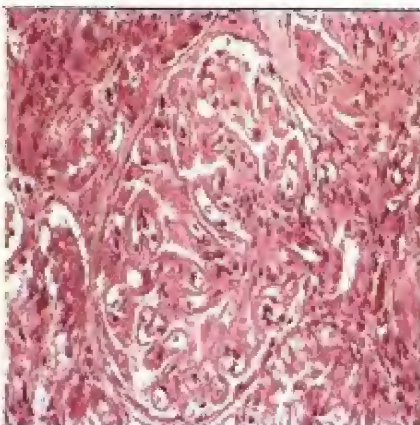


**66- Organ:** kidney

**Lesion:** Membranous glomerulonephritis

**Stain:** H&E

**Micro:** Thickening of the capillary walls of a glomerulus due to deposition of immune complexes, and thickening of the glomerular basement membrane with patent capillary lumina. Note lack of hypercellularity.



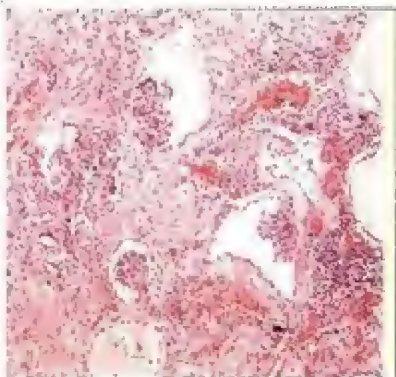


**57-Organ:** kidney

**Lesion:** Chronic interstitial nephritis

**Stain:** H&E

**Micro:** Renal cortex. Almost complete replacement of nephrons by fibrous tissue, which contains random accumulations of mononuclear inflammatory cells. Remnants of tubules, glomeruli situated close together, dilated urinary spaces filled with proteinaceous material, and atrophic glomerular tufts are evident. Adhesions between Bowman's capsule and a tuft of a compensatory-hypertrophied glomerulus (left).



**68-Organ:** kidney

**Lesion:** Focal interstitial nephritis

**Macro:** Renal surface. Multiple grayish-white prominent nodules (white potted kidney) in the renal cortex due to a proliferative inflammation.



**69-Organ:** kidney

**Lesion:** Embolic purulent nephritis

**Macro:** Renal surface. Multiple small grayish-yellow prominent foci are seen in the renal cortex due to micro-abscess formation, mainly originating from glomeruli hematogenously infected by pyogenic bacteria. Extension to the medulla and the pelvis frequently occurs.



**70-Organ:** kidney

**Lesion:** pyelonephritis

**Stain:** H&E

**Micro:** Papillary necrosis (right) demarcated by a rim of neutrophils. Multiple round and elongated foci of suppurative inflammation (blue) and areas of fibrosis (pink) in the cortex, suggesting a descending pathogenesis of the necrotizing papillitis.



**71-Organ:** kidney

**Lesion:** Hydronephrosis

**Macro:** Renal cut surface, ureter and opened urinary bladder. Unilateral dilation of the renal pelvis and ureter (hydroureter) associated with atrophy of renal tissue, caused by impairment of urinary flow due to a transitional cell carcinoma in the neck of the bladder. Muscular hypertrophy of the bladder is present.

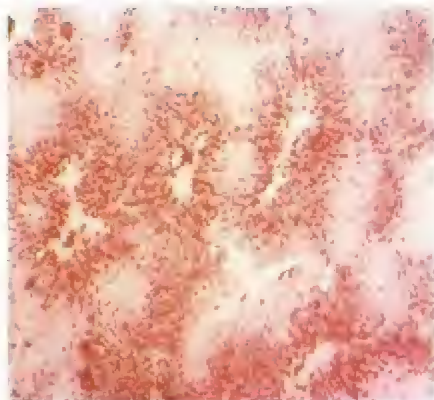


**72- Organ:** liver

**Lesion:** chronic venous congestion.

**Stain:** H&E

**Micro:** central vein and hepatic sinusoids are diffusely engorged with blood

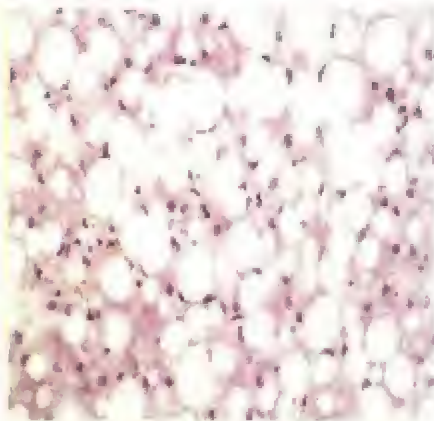


**73-Organ:** liver

**Lesion:** fatty change

**Stain:** H&E

**Macro:** variable sized clear vacuoles with definite borders localized in cytoplasm of hepatocytes. Vacuoles are either multiple and small or single large sized displacing hepatocyte nucleus to one side to appear compressed or atrophied and give the characteristic shape (signet ring appearance).



**74-Organ:** liver

**Lesion:** Hepatic Cirrhosis

**Macro:** presence of multiple nodules on liver surface separated by fibrous tissue septa.



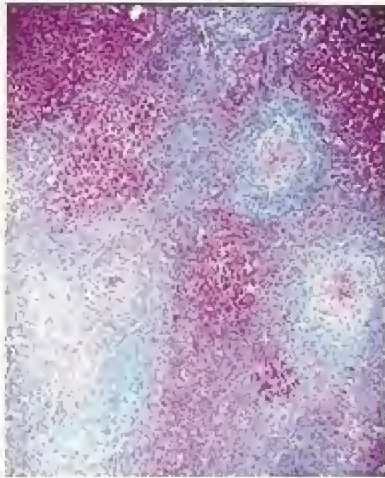


**75-Organ:** liver

**Lesion:** Hepatic Cirrhosis

**Stain:** Masson trichrome

**Micro:** extensive fibrous tissue proliferation around shistosoma egg stained blue and massive necrosis of hepatocytes.

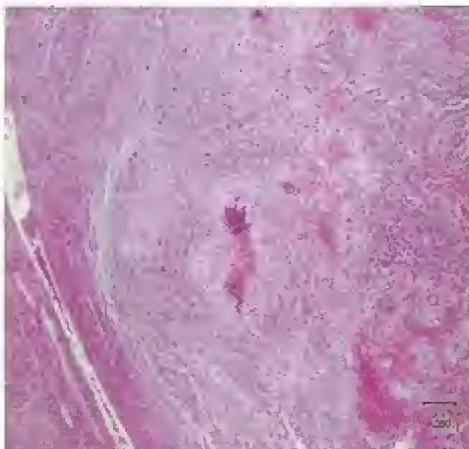


**76-Organ:** liver

**Lesion:** pyogranulomatous inflammation

**Stain:** H&E

**Micro:** focal replacement of hepatic tissue with pyogranulomatous nodules consisted of necrotic center followed by neutrophilic exudate, aggregation of macrophages, giant cells and enclosed by FCT.



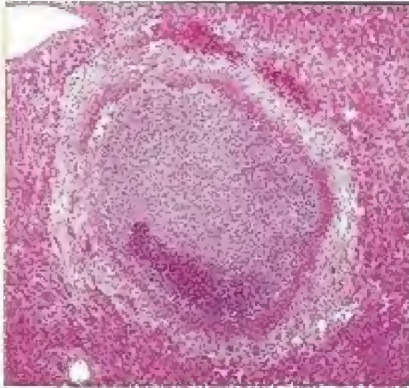


**77-Organ:** liver

**Lesion:** localized hepatic abscess

**Stain:** H&E

**Micro:** focal replacement of hepatic tissue with an abscess consisted of aggregation of living and dead neutrophils and enclosed by necrotic hepatocytes and FCT infiltrated with leukocytes (lymphocytes and macrophages).



**78-Organ:** liver

**Lesion:** large hepatic abscess

**Macro:** single large encapsulated hepatic abscess bulging over the hepatic surface accompanied by swollen omphalic blood vessel.

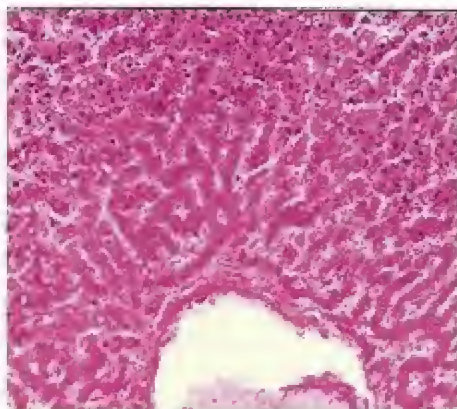


**79- Organ:** liver

**Lesion:** centrilobular coagulative necrosis.

**Stain:** H&E

**Micro:** hepatocytes in the hepatic cords around central vein (centrilobular) loss their cellular details but maintain hepatic architecture. Pyknosis, karyorrhexis and karyolysis are characteristic.



**80- Organ:** liver

**Lesion:** multifocal hepatic necrosis

**Macro:** multifocal areas of tan colored coagulative necrosis are distributed all over liver surface.



**81-Organ:** liver

**Lesion:** chronic venous congestion.

**Macro:** mottled liver of pale and dark congested area.

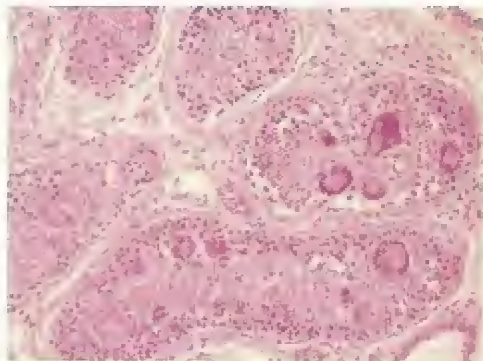


**82-Organ:** Testis

**Lesion:** Testicular degeneration.

**Stain:** H&E

**Micro:** Nuclear pyknosis of necrotic cells. There are many multinucleated giant cells in the lumen of the seminiferous tubules, probably formed by fusion of degenerated spermatogenic cells.

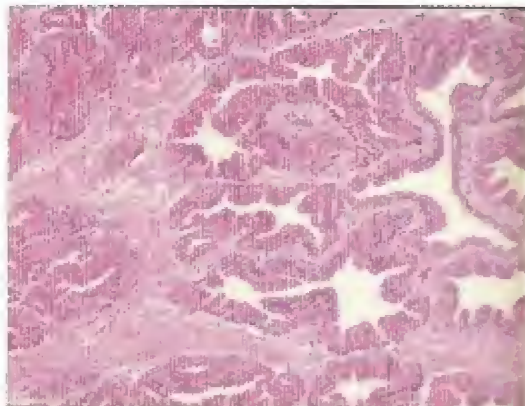


**83-Organ:** Prostate

**Lesion:** Prostatic hyperplasia and hypertrophy.

**Stain:** H&E

**Micro:** Diffuse hyperplasia characterized by tall epithelium and papillary growth into the lumen. Some cystic glands, as well as, broad sheets of hyperplastic fibromuscular tissue are seen.



**84- Organ:** Testis

**Lesion:** Abdominal cryptorchidism

**Stain:** H&E

**Micro:** seminiferous tubules lacking spermatogenic epithelium are completely lined with tall Sertoli cells.

